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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 2002P13378WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/09233	International filing date (<i>day/month/year</i>) 20.08.2003	Priority date (<i>day/month/year</i>) 20.08.2002
International Patent Classification (IPC) or both national classification and IPC H04Q3/00		
Applicant SIEMENS AKTIENGESELLSCHAFT et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.
 - ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 18.02.2004	Date of completion of this report 30.11.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Vercauteren, S Telephone No. +31 70 340-1045 

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EXAMINATION REPORT**

International application No. **PCT/EP 03/09233**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

Description, Pages

1-8 as originally filed

Claims, Numbers

1-8 received on 19.08.2004 with letter of 18.08.2004

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-8
	No: Claims	
Inventive step (IS)	Yes: Claims	1-8
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1: US-B-6 351 5241 (SCHUSTER G M ET AL) 26 February 2002 (2002-02-26)
- D2: WO 98/32273 A (NEW E-MAIL COMMUNICATION SYSTEMS LTD) 23 July 1998 (1998-07-23)
- D3: US-B-6 320 9411 (TYROLER D) 20 November 2001 (2001-11-20)
- D4: US-B-6 212 2651 (DUPHORNE D) 3 April 2001 (2001-04-03)
- D5: WO 98/54873 A (SIEMENS AG) 3 December 1998 (1998-12-03)
- D6: EP-A-0 798 899 (NEDERLAND PTT) 1 October 1997 (1997-10-01)

Claim 1

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document) a method (cf. Fig. 6) for an E-mail waiting indication (EWI) query of a mail server located in a packet-switched network via a PSTN or mobile terminal device comprising:

- inputting service information at the PSTN or mobile terminal device and transmitting a trigger/EWI request to a Remote Access Server (RAS) (cf. col. 3, line 61 - col. 4, line 10; col. 7, lines 8-15; col. 8, lines 18-34);
- adapting the EWI request and submitting a query to the mail server over the packet-switched network via the RAS (cf. col. 8, line 34 - col. 9, line 20; col. 10, line 4 - col. 11, line 21).

The subject-matter of claim 1 differs from this known method in that the trigger is transmitted to and the EWI request is generated at an internode module, which forms part of a transit exchange or is located on a standalone platform in the PSTN, and in that the EWI request is transmitted to an application server which then queries the mail server. In other words, in the method of claim 1, the EWI-querying service is provided by an internode module in the PSTN and an application server in the packet-switched network, whereas in the method of D1, this service is provided by the RAS, which is operated by the ISP.

The technical effect of this difference is that the EWI-querying service is decoupled

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from the ISP.

The problem to be solved by the present invention is thus that the EWI-querying service can not be provided to PSTN or mobile subscribers whose ISP does not provide the requisite functionality.

None of the available documents discloses or hints at a solution to this problem by means of the features of claim 1.

Document D1 teaches to concentrate the EWI-querying functionality together with the RAS-functionality, which has the apparent advantage that less steps are required and hence fewer network elements are involved, and therefore teaches away from the present invention to extract and move the EWI-querying functionality towards the PSTN, i.e. at the internode module, and the packet-switched network, i.e. at the application server.

Document D2 discloses an application server (cf. grabbing server 11A) querying a number of mail servers (cf. the E-mail servers 12A .. 12B), however does not disclose an internode module receiving a trigger and generating an EWI-request.

Document D3 discloses a device 10, which acts as annunciator and queries the ISP whether there is any new E-mail, however discloses neither an internode module in the PSTN nor an application server.

Document D4 discloses the two different realisations for EWI that are indicated in the description on page 1, line 30 - page 2, line 12, on page 2, lines 14-26, respectively, i.e. the ISP E-mail server sending a notification signal to the central office (cf. col. 4, lines 10-13) resp. the central office periodically querying the ISP E-mail server (cf. col. 4, lines 3-10). It is also suggested that the query software may be operated by an application server (cf. "other suitable service provider", see col. 4, lines 13-15). In any case, document D4 does not disclose an internode module receiving a trigger and generating an EWI-request.

Document D5 discloses said first EWI realisation (cf. the abstract).

Document D6 discloses said first EWI realisation (cf. col. 3, line 18 - col. 4, line 23) and said second EWI realisation (cf. Fig. 2 and col. 4, lines 36-40).

The subject-matter of claim 1 is therefore new and inventive and as such meets the requirements of Article 33(2) and (3) PCT.

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Claims 2-7

Claims 2-7 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty (Article 33(2) PCT) and inventive step (Article 33(3) PCT).

Claim 8

Claim 8 defines an internode module comprising means for carrying out the method of claim 1. The method of claim 1 is new and inventive due to the presence of said internode module (see above). The subject-matter of claim 8 is therefore also new and inventive and as such also meets the requirements of Article 33(2) and (3) PCT.

We claim:

1. A method for an EWI (email waiting indication) query of an
5 mail server (MS) located in a packet-switched network (IPNET)
via a PSTN terminal device (TEL), comprising:
a) inputting of service access information (SAC(E.164)) at
the PSTN terminal device (TEL),
b) transmitting a trigger to an internode module (INM), which
10 either forms part of a transit exchange or is located on a
standalone platform in the PSTN,
c) generating an EWI request (rq(aid, E.164, iaauth, adEWIS))
at the internode module (INM),
d) adapting the EWI request (rq(aid, E.164, iaauth, adEWIS))
15 for transmission over the packet-switched network (IPNET) in
a RAS (remote access server) server (IWU),
e) transmitting the EWI request (rq(aid, E.164, iaauth,
adEWIS)) to an application server (EWIS), and
f) submitting a query (qu(uid, PW, adMS, adEWIS)) to the mail
20 server (MS) via the application server (EWIS).

2. The method according to claim 1, characterised in that the
service access information (SAC(E.164)) is transmitted to the
internode module (INM) via a central office (CO), a private
25 branch exchange (PBX), or a transit exchange (TX).

3. The method according to one of the claims 1 to 2,
characterised in that the DSS1 protocol or frequency shift
keying (FSK) is employed for transmission of the service
30 access information (SAC(E.164)) to the internode module
(INM).

4. The method according to one of the claims 1 to 3,
characterised in that the DSS1 protocol is employed for
35 transmission of the EWI request (rq(aid, E.164, iaauth,
adEWIS)) to the RAS server.

5. The method according to one of the preceding claims, characterised in that the POP3 protocol, the IMAP protocol or the SMTP protocol is employed for the query of the mail server (MS).

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6. The method according to one of the preceding claims, characterised in that information (inf) retrieved through the IMW query is sent to a service subscriber via voice message.

10 7. The method according to one of the claims 1 to 7, characterised in that information (inf) retrieved through the IMW query is sent to a service subscriber via SMS message.

15 8. Internode module (INM) comprising means adapted for carrying out a method according to one of the claims 1 to 7, where

a) the internode module (INM) either forms part of a transit exchange or an open service platform or is located in a standalone platform, and

20 b) the internode module (INM) comprises means for generating an EWI request (rq(aid, E.164, iaauth, adEWIS)).